



CAPITAL PROJECT FORUM

San José's Green Vision
What does it mean for the CIP?
September 16, 2008



San José Green Vision

PRESENTERS:

- ❖ **Ashwini Kantak, CMO**
- ❖ **Jessie Denver, ESD**
- ❖ **Laura Stuchinsky, DOT**
- ❖ **John Cannon, DPW**



San José Green Vision

AGENDA:

- ❖ **Green Vision – what is it?**
- ❖ **Focus Areas**
 - Green Buildings
 - Energy
 - Green Mobility
- ❖ **What could your role be?**



San José Green Vision

1. 25,000 new Clean Tech jobs
2. Cut per capita energy use by 50%
3. 100% renewable electricity for San José
4. Build or retrofit 50 million square feet of green buildings
5. Zero waste to landfill
6. 100% beneficial reuse of wastewater
7. General Plan with measurable sustainability standards
8. Entire public fleet will use alternative fuels
9. 100,000 new trees and smart, zero-net streetlights
10. 100 miles of new trails



Why Green Vision?

- ❖ **Environmental Stewardship**
- ❖ **Economic Growth**
- ❖ **Fiscal Responsibility**
- ❖ **Community Benefit**



How do we get there?

- ❖ **Lead by Example**
- ❖ **Engage the Community**
- ❖ **Form Strategic Partnerships**
- ❖ **Explore Financing Mechanisms**
- ❖ **Advocate Policies**



Focus Areas

- ❖ **Green Buildings**
- ❖ **Energy**
- ❖ **Green Mobility**



Green Building Goal

A photograph of a modern building with a green roof and a courtyard. The building features large glass windows and a wooden roof structure. The courtyard has a concrete wall and is planted with green plants. The image is used as a background for the text.

Build or Retrofit 50 million square feet
of Green Buildings
In San Jose by 2022

Green Building Status in San Jose

- Over 1 million square feet of third party certified green buildings
- More than 7 million square feet of green building currently in design and construction



Gish Apartments



West Valley Library



Adobe Headquarters



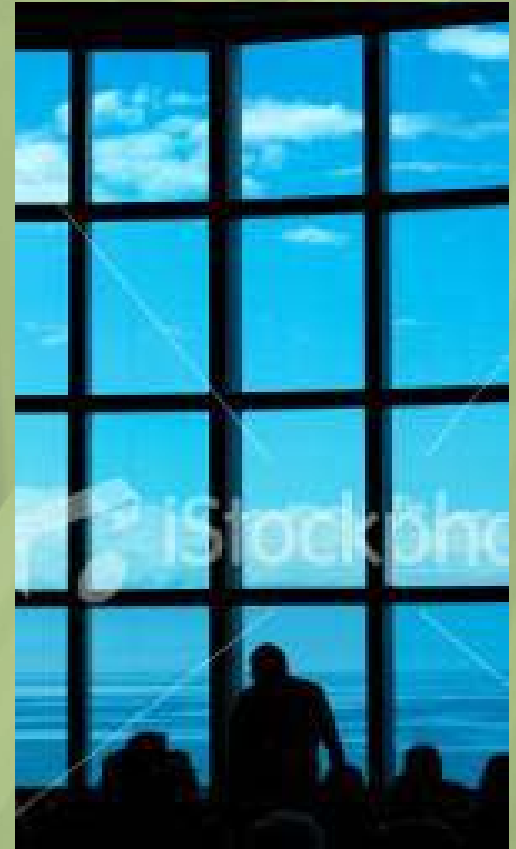
Why Build Green?

Buildings are our habitat

- People spend 90% of their time indoors
- Air quality indoors is often worse than outdoors

Buildings Account For

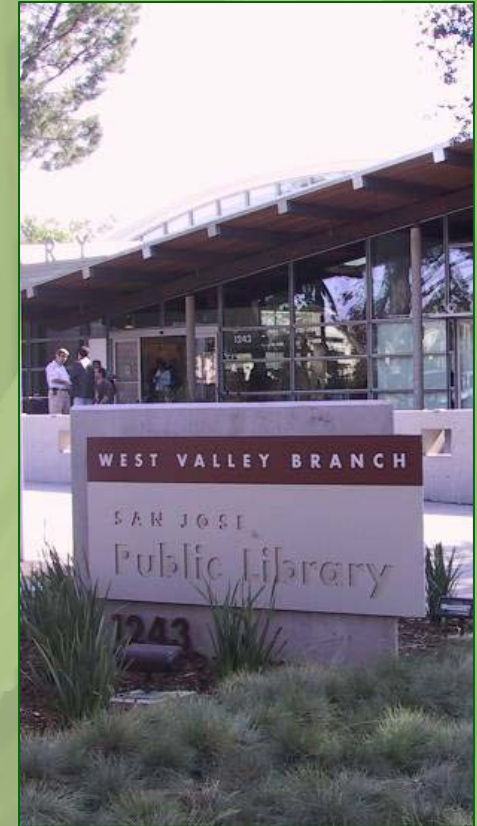
- 71% of electricity consumption
- 39% of CO₂ emissions
- 30% of raw materials use
- 30% of waste output
- 12% of potable water consumption



What is Green Building?

Design, Construction, Operation, and Maintenance practices that reduce or eliminate negative impacts of buildings on occupants and the environment

- Reduce greenhouse gas emissions
- Protect health and well being
- Conserve and protect natural resources
- Reduce energy and water consumption
- Divert waste from landfills



Commitment for City Facilities

- Policy Adopted 2001, amended in 2007
- LEED Silver required –
 - “Go for the Gold”
 - West Valley Library is the first library in the nation to be LEED certified
 - Central Service Yard is the first LEED Silver project in the City
 - 18 other City facilities pursuing LEED certification

Overview of LEED™

United States Green Building Council's Leadership in Energy and Environmental Design

- Whole-building approach encourages and guides a collaborative, integrated design and construction process
- Optimizes environmental and economic factors
- Four levels of certification
 - LEED Certified 26 - 32 points
 - Silver Level 33 - 38 points
 - Gold Level 39 - 51 points
 - Platinum Level 52+ points (69 possible)



Resources

- Green Building User's Group
- www.usgbc.org
- Technical trainings
- Consultants on call
- Green Building Steering Committee

Municipal Energy Initiative

- Energy sustainability program that integrates:
 - Comprehensive **energy efficiency**
 - **Solar potential** of rooftops & land area
- Provides greater City control over utility costs
- Enhances electric reliability
- Reduces greenhouse gas emissions



Municipal Energy Initiative (continued)

Collaboration: Efficiency is Key !

- Existing buildings to incorporate
 - efficiency retrofits
 - structural stability evaluation
 - roof replacement
- New construction to incorporate
 - passive design
 - efficiency
 - solar ready



Municipal Energy Initiative (continued)

Green Visions Goals:

Goal 2: Reduce per capita energy use by 50%

- Municipal Facilities Energy Efficiency Program
 - Mabury Service Yard
 - Fire Stations
 - Fair Swim Center
 - Computer Power Management
 - DOT Parking Garages



Municipal Energy Initiative (continued)

Fire Stations

- In process; 11 stations
- Annual energy cost savings = **\$15,000**



Mabury Service Yard

- Complete
- Annual energy cost savings = **\$22,400**
- **This is a 50% reduction in lighting electrical use at this facility!**



Municipal Energy Initiative (continued)

Computer Power Management Project

- Estimated Cost: \$0
- Annual estimated energy cost savings: **\$325,000**
- Rebate: \$65,000
- CO2 emission reduction: 293 tons annually
- 50 cars off the road



Energy Efficiency is Good Business

Implementation Cost	\$2.3 million
Energy Cost Savings	\$1.2 million
Available Rebates	\$825K
Return on Investment	1.2 years
Long term Savings (10 yr.)	\$10+ million

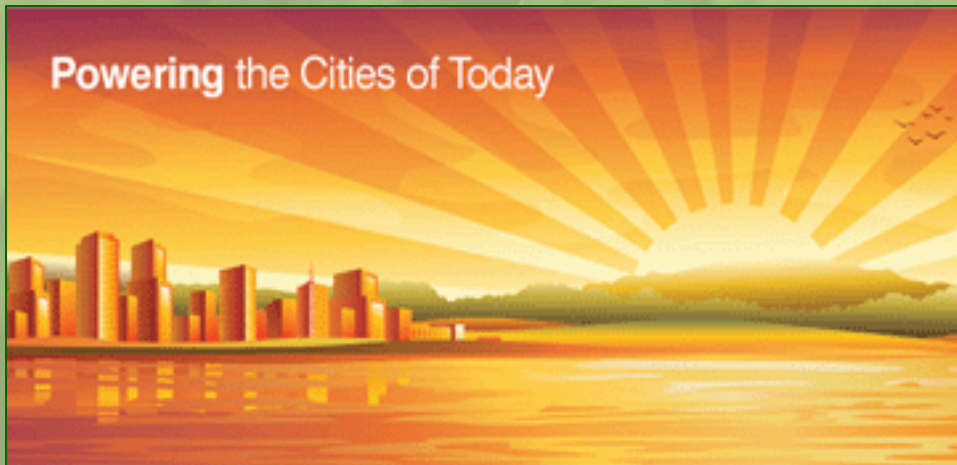
Estimate doesn't factor volatile utility market
Rates are going up next 5 years....
Savings will far exceed the \$10 million.



Municipal Energy Initiative (continued)

Goal 3: Receive 100 percent of our electrical power from clean renewable sources

- Purchase 100% renewable energy for City facilities
- U.S. Department of Energy Solar America Showcase



City Facility Solar Installations

Possible issues:

- Structural Stability
- Electrical Wiring
- Fire Codes

CIP Coordination Activities:

- Drawings
- Inspections
- Ensuring/Determining Solar Readiness
- Expansion Issues
- Load issues/restrictions

4th Street Employee Parking Garage



Children's Discovery Museum



Convention Center



HP Arena



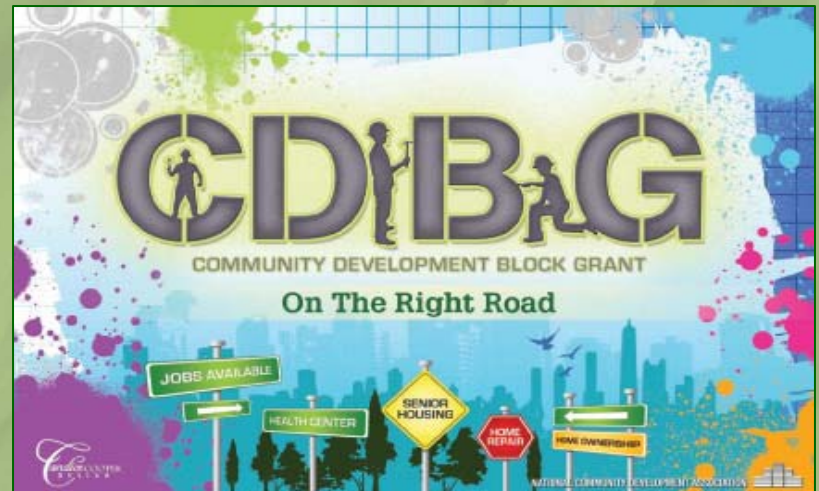
Central Service Yard



Community Development Block Grant

Public Facilities Energy & Green Building Improvement Project

- \$500,000 grant
- Energy & Green Building
- Underway August 08 - complete July 09
- Fire Stations: 1,3,16
- Community Centers: Northside, St. James, Gardner, Alum Rock Youth Center, Hank Lopez, Washington United Youth Center
- Library: Alviso



Community Development Block Grant

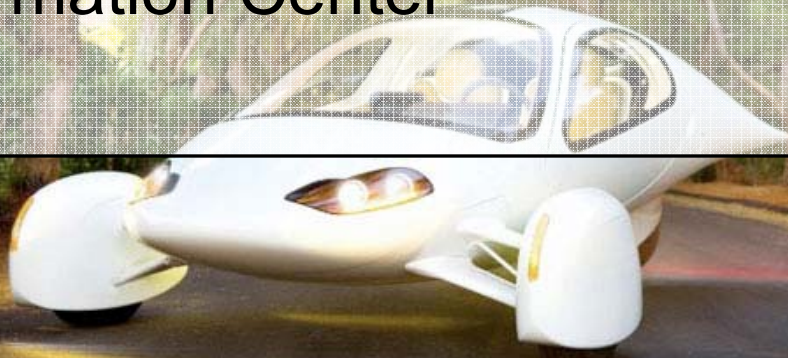


CIP staff will be involved in implementing the goals of this Project!



Green Vision: Green Mobility

- Streetlights
- Green Mobility Showcase
- Urban Forrest
- Transportation Incident Management Center
- Traveler Information Center



ChargePoint
mychargepoint.net

Green Vision: Green Mobility

Goal 9: Plant 100,000 new trees and replace 100% of city streetlights with zero emission lights

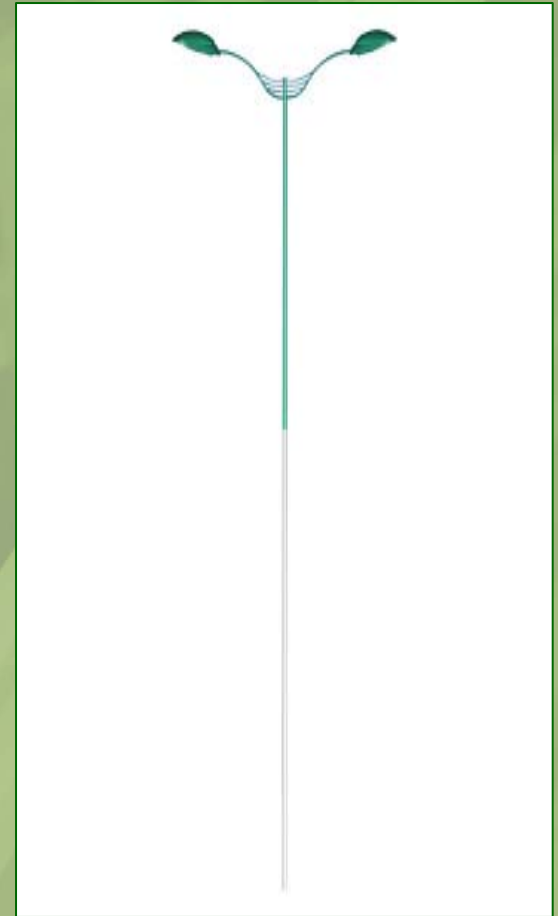
Plus:

- Encourage more pedestrian and bike travel in part via 100 miles of interconnected trails.
- 100% of public fleet on alternative fuels and provide public access to alternative fuels.
- Encourage development of alternatively-fueled mass and private transit vehicles
- Use pervious materials to pave streets, parking lots and sidewalks

100% Zero Emission Lights

First steps:

- Revise City Streetlight Policy
- Test strategies to significantly reduce energy consumption (Green Mobility Showcase)
- Increase renewable energy supply dedicated to streetlights or integrated into fixture



Green Mobility Showcase

Demonstrate:

- LED streetlights
- Plug-in stations for electric and hybrid-electric vehicles
- Remote control of lights
 - o Solar-powered cooling station
 - o Advanced streetlight poles





Green Mobility Showcase

Plug-in station for PHEV/EVs

- Smart charger for plug-in vehicles.
- Allows drivers to re-charge vehicle away from home at key destination points
- User pays bill



100,000 new trees in 10 years



First Steps:

- Hiring Urban Forester
- Urban Forestry Policy Framework
- Inventory of existing trees and system to track new (and removed) trees public and private
- Lighting and Landscape District



Traveler Information Center

- Real time info on traffic flow, transit, incidents, events
- Provide info to visitors on city destinations/events and how to get there.
- 2 years in development. New technology helping to realize vision
- Launch October 2008



New Transportation Incident Management Center

Employee Parking Garage, North 5th Street, Ground Floor



Current Traffic Management Center

Functions:

- Monitor Signal and System Performance
- Remote Traffic Signal Timing
- Manage Event Traffic (200+ per year)
- Coordinate Inter-jurisdictional Traffic Systems
- Support EOC during Emergencies
- Teleconference center



Projects Underway



Update: Standard Specifications & Details

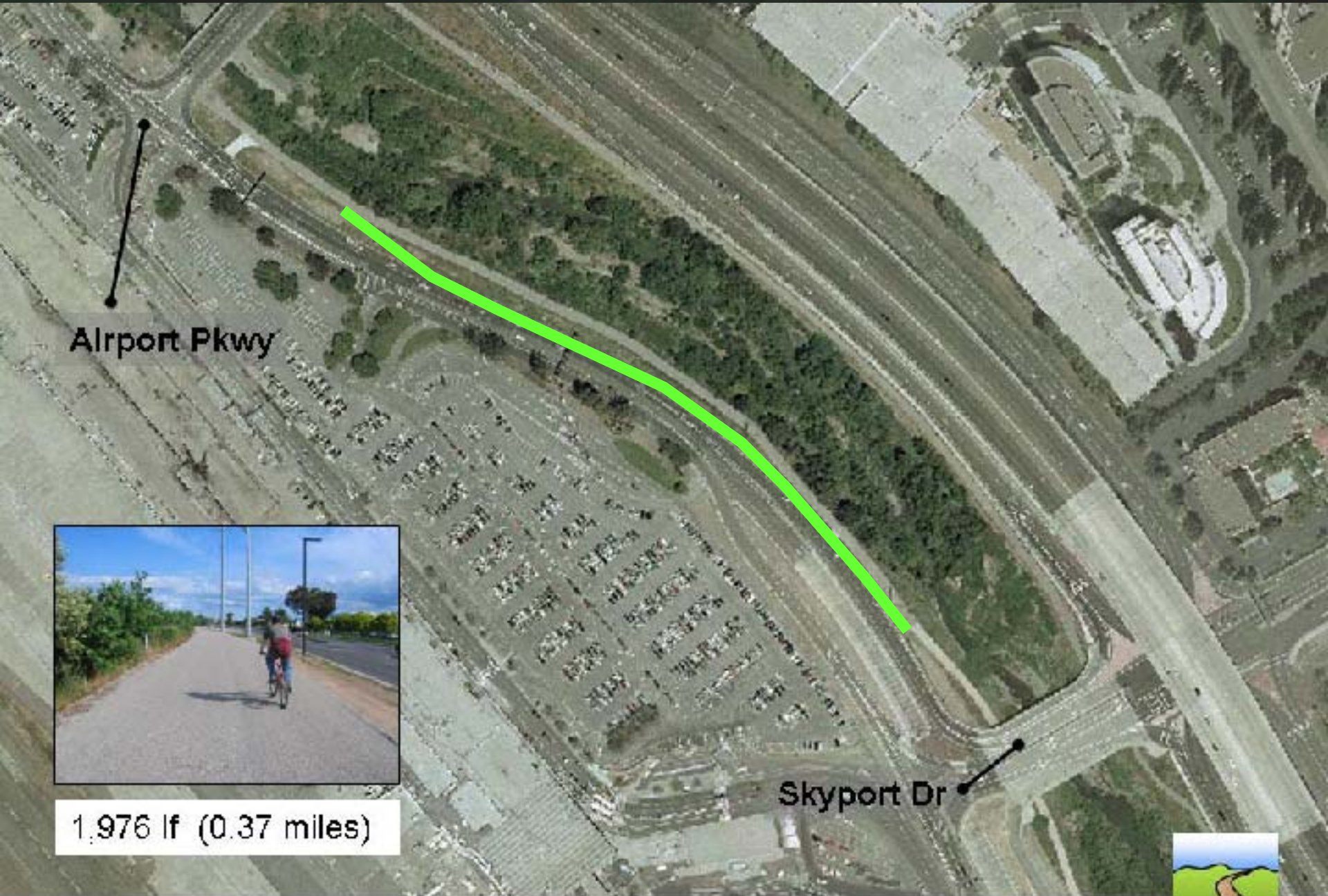
- 16 years since last update
- 60 people, 7 Departments participating
- To be completed Spring 2009
- New materials and construction methods
 - “Green” concrete
 - Recycled materials - concrete, asphalt, aggregate base
 - Working on LED streetlight specs
 - Increased non-potable water use
 - Pervious pavement for runoff and trees
 - Testing program to evaluate effectiveness of new materials
- Demonstration Projects





GREEN MOBILITY SHOWCASE

Santa Clara Street Sidewalk Project



Airport Pkwy

Skyport Dr

1,976 lf (0.37 miles)

Pervious Pavement Test Site - Lower Guadalupe River Trail



What could your role be?

- ❖ **Innovators and Implementers**
- ❖ **Ambassadors of Change**



Innovators and Implementers

- ❖ **Demonstration projects policy in place**
- ❖ **Opportunity for innovation & creativity**
- ❖ **Lessons learned can be incorporated into capital improvement projects**



Ambassadors of Change

Using your projects to influence and engage

- ❖ **Planning & Design – Community outreach, plans and specifications, public art**
- ❖ **Construction – Signs, construction updates**
- ❖ **Grand Opening – Green Vision communications team**
- ❖ **Beneficial Use - Interpretive signage, exhibits, tours**



Questions & Answers

